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=> s agrobacterium(w)mediated(w)transformation
L1 2111 AGROBACTERIUM(W) MEDIATED(W) TRANSFORMATION

=> s l1 and poplar
L 6 L1 AND POPULAR

=> d 12 1-6

L2 ANSWER 1 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:129153 BIOSIS

DN PREV20000129153

TI Construction of small binary vectors for **Agrobacterium-**
mediated transformation in plants.

AU Lim, Jekng Hwa; Kang, Young Na; Kim, Young A.; Kim, Dae Heon; Hwang,
Inwan 1

CS (1) Department of Life Science and Center for Plant Intracellular
Trafficking, Pohang University of Science and Technology (POSTECH),
Pohang, 790-784 South Korea

SO Journal of Plant Biology., (Dec., 1999) Vol. 42, No. 4, pp. 317-320.
ISSN: 1216-9239.

BT Article

LA English

SL English

L2 ANSWER 2 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1995:108034 BIOSIS

DN PREV1995030108034

TI **Agrobacterium-mediated transformation** of
poplar using a disarmed binary vector and the overexpression of a specific
member of a family of **poplar** peroxidase genes in transgenic
poplar cells.

AU Kajita, Shinya; Otsukabe, Kei hi; Katayama, Yoshihiro (1); Kawai, Shinya;
Matsunaga, Tasuo; Hata, Kunio; Morokoshi, Noriyuki

CS (1) Cooperative Res. Cent., Tokyo Univ. Agric. Technol., Koganei-shi,
Tokyo 184 Japan

SO Plant Science (Limerick), (1994) Vol. 103, No. 2, pp. 231-239.
ISSN: 1168-4452.

BT Article

LA English

L2 ANSWER 3 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1994:436200 BIOSIS

DN PREV199497449200

TI Expression of the mutant *Arabidopsis thaliana* acetolactate synthase gene

confers chlorosulfuron resistance to transgenic **poplar** plants.
 AT Brasileiro, Ana Cristina Miranda; Tourneux, Colette; Lepie, Jean-Charles;
 Combes, Valerie; Jouanin, Lise [1]
 CS (1) Laboratoire de Biologie Cellulaire, INRA, route de Saint-Cyr, F-78026
 Versailles Cedex France
 SO Transgenic Research, 1992) Vol. 1, No. 3, pp. 133-141.
 ISSN: 0962-8811.
 DT Article
 LA English

L2 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:312048 CAPLUS
 DN 133:319355
 TI In vitro regeneration and **Agrobacterium-mediated transformation** of *Phaseolus vulgaris* L. (common bean) and *P. acutifolius* A. Gray (lupary bean)
 AJ Dallen, W.; Darbre, M.; De Clercq, J.; Grossens, A.; Kapila, J.; Vranova, E.; Van Montagu, M.; Angillon, G.
 CS Laboratorium voor Genetica, Department Genetica, Vlaams Interuniversitair Instituut voor Biotechnologie (VIB), Universiteit Gent, Ghent, B-9000, Belg.
 SO Acta Horticulturae 2200, 5-1 (Proceedings of the XXV International Horticultural Congress, 1998, Ft. 11, 59-55
 CODEN: AHORA2; ISSN: 0013-7512
 PB International Society for Horticultural Science
 DT Journal
 LA English
 RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:308402 CAPLUS
 DN 133:150437
 TI Towards novel flower colors in Forsythia by genetic engineering
 AU Rosati, G.; Baron, M.; Cadis, A.; Rosati, C.; Simoneau, Ph.
 CS Unite d'Acclimation des Espèces Fruitières et Ornementales, INRA C.R. Angers, Beaupréze, 48111, Fr.
 SO Acta Horticulturae 2100, 106 (Proceedings of the Nineteenth International Symposium on Improvement of Ornamental Plants, 1993), 45-48
 CODEN: AHORA2; ISSN: 0013-7512
 PB International Society for Horticultural Science
 DT Journal; General Review
 LA English
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:110273 CAPLUS
 DN 133:145577
 TI Construction of small binary vectors for **Agrobacterium-mediated transformation** in plants
 AU Lim, Jeong Hwa; Kang, Young Na; Kim, Young A.; Kim, Dae Heon; Hwang, Inhwan
 CS Department of Life Science and Center for Plant Intracellular Trafficking, Pohang University of Science and Technology (POSTECH), Pohang, 790-784, S. Korea
 SO Journal of Plant Biology (1999), 42(4), 317-326
 CODEN: JPBIF; ISSN: 1076-9239
 PB Botanical Society of Korea
 DT Journal
 LA English
 RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL STNGUIDE
COST IN U.S. DOLLARS

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LAST RELOADED: Jun 21, 2002 (20020621/UP).

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2 ANSWER 2 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB An efficient method was established for transformation of the poplar hybrid *Populus kitalumensis* (*Populus sirooidii* times *Populus gradidentata*) using a binary disarmed strain of *Agrobacterium tumefaciens* LBA4404 and T₁-binary vectors. The frequency of transformation of poplar leaf segments reached as high as 60%. In transgenic poplar plants, the gene for beta-glucuronidase (*gus*) was expressed at high levels under the control of the cauliflower mosaic virus 35S (CaMV35S) promoter. Poplars possess a number of peroxidase isozymes whose pattern of expression is tissue-specific, developmentally regulated and influenced by environmental factors. We altered the expression of a peroxidase isozyme by introducing an identified genomic gene for a peroxidase (*prxA1*) under the control of the CaMV35S promoter. Transgenic poplars obtained by introducing the chimeric peroxidase gene (CaMV35S promoter-*prxA1*) were shown to have an increase in total peroxidase activity that was accounted for by the specific overproduction of the peroxidase isozyme (*PrxA1*). From this study, the anionic peroxidase isozyme encoded by the identified genomic gene, *prxA1*, was demonstrated to be the anionic peroxidase isozyme with a pI of 4.4 among various isozymes of poplar peroxidase. On the basis of this assignment, we characterized the tissue-specific and UV-light-inducible regulation of expression of this isozyme.

L2 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The mutant acetolactate synthase (*crsl-1*) gene from *Arabidopsis thaliana*, which confers resistance to the herbicide chlorsulfuron, was transferred to a hybrid poplar (*Populus tremula* times *P. alba*) using two **Agrobacterium-mediated transformation methods** (co-inoculation and co-cultivation). Two different constructs were used. In one, the mutant *crsl-1* gene was placed under the control of its own promoter, and, in the other, this gene was under the control of the duplicated cauliflower mosaic virus 35S promoter (70 promoter). The transformation efficiency ranged from 22 to 33% of the tumors in co-inoculation and from 67 to 77% of the stem explants in co-cultivation experiments. The usefulness of the herbicide chlorsulfuron as a selectable marker gene was also demonstrated. Successful genetic transformation was verified by Southern and Northern analyses and enzyme activity. Plants carrying the *crsl-1* mutant gene under the control of the 70 promoter showed high levels of transcription and activity whereas plants carrying the native *crsl-1* gene showed low levels of expression. However, transgenic plants expressing each of the chimeric *crsl-1* genes are completely resistant to high doses of chlorsulfuron in greenhouse tests.

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